

AMENDMENTS TO THE SPECIFICATION:

Kindly amend the specification as follows:

Please add the following paragraph at page 1, line 2.

This application is a divisional of United States Patent Application Serial No. 10/043,954, filed January 10, 2002, which is currently pending and is incorporated herein by reference.

On page 5, please rewrite the paragraph that begins on line 12 as follows:

As mentioned above, the present invention provides an improved process over the DCC processes of the prior art, by providing for the cracking in two separate and distinct cracking zones, the first operating at a relatively high weight hourly space velocity, and the second operating at a relatively low weight hour space velocity. The Figure shows a schematic arrangement of a riser and regenerator system useful in the practice of the present invention. The arrangement of the Figure comprises a first ~~narrow~~ riser section 2 where the feedstock is selectively catalytically cracked to form gasoline, a ~~broader~~ second riser section 4 where the gasoline produced in the first riser section is selectively catalytically cracked to olefins, a disengager vessel 6, a stripper 8 and a regenerator 10 that provides for a conversion zone and for the pneumatic conveyance of catalyst. The arrangement circulates the catalyst and contacts the feed in the manner described herein below. Because the second riser section 4 is wider in radius relative to the first riser section 2, these sections are at times referenced herein as the narrow and broader sections, respectively.

On page 6, please rewrite the paragraph that begins on line 16 as follows:

The first narrow riser section 2 then proceeds through a diameter transition zone 20 and into the second broader riser section 4. The ratio of the radius of the second broader riser section 4 to the radius of the first narrow riser 2 section 2 should range from about 1.1:1 to about 5.0:1, preferably from about 1.25:1 to about 2.5:1, or from about

1.5:1 to about 2.5:1. Typically, the radius of the first narrow riser section 2 can range from about six inches (6") to about eight feet (8'), preferably from about two feet (2') to about six feet (6'), and the radius of the second wider riser section 4 can range from about nine inches (9") to about sixteen feet (16'), preferably from about three feet (3') to about ten feet (10'). However, the actual radius size will generally be dependent upon the amount of hydrocarbon feedstock which is being cracked in the reactor. Also preferred is where the diameter transition zone 20 effects a relatively smooth diameter transition, such as at an interior angle 22 ranging from about 5° 185° to about 30° 210° , preferably from about 8° 188° to about 20° 200° .

Please rewrite the paragraph bridging pages 7 and 8 as follows:

After completion of the ~~conversion~~ cracking in the second broader riser section 4, the riser narrows to termination section 26 that directs the cracked gases into a crossover duct 28 or other riser termination devices as are well known to those skilled in the art. The radius of the termination section 26 is not critical to the present invention; however, preferably the radius of the termination section 26 is approximately the same as that of the first riser section 2. The radius of the termination section 26 should be sufficient to accommodate the increased volume of lighter components and is suitable for attaching to the crossover duct. Again, as with the first diameter transition zone 22 20, a second transition zone 25 is preferred between the second broader riser section 4 and termination section 26 which effects a relatively smooth diameter transition, such as at an interior angle 27 ranging from about 5° 175° to about 30° 150° , preferably from about 8° 172° to about 20° 160° .

On page 8, please rewrite the paragraph that begins on line 7 as follows:

At the riser top 28, near the crossover duct, the cracked vapors are discharged into gas recovery conduits 30 that direct the cracked gas vapors mixed with spent catalyst into cyclones 32. Spent catalyst is separated from the cracked gas vapors in the cyclones 32 and the spent catalyst falls out of cyclone 32 through dipleg 34 at a rate regulated by a dipleg sealing means, such as a flapper valve, 36. Secondary cyclones (not shown) may also be included in the disengaging vessel 6 to separate catalyst fines from the cracked vapors as is well known in the art.